

REMARKS

Claims 7-17 and 51-59 are currently pending in the application. Claim 51 has been amended. Claims 1-6 and 18-50 were previously canceled. No new matter has been added by way of this amendment.

Rejections under 35 U.S.C. § 103

The Examiner rejected claims 7-17, and 51-59 under 35 U.S.C. § 103(a) as obvious over *Cable Modem Telephony Return Interface Specification* ("CMTRIS") in view of *Operations Support System Interface Specification* ("OSSI") and *DAVIC Cable Modem Specification* ("DAVIC").

Applicants respectfully disagree with the bases for the rejections and request reconsideration and further examination of the claims.

As set forth in pending claims 7-17 and 51-59, a network station manager and method of administering a broadband, cable modem network station for connectivity to a network (*see* claims 7 and 51, respectively) are provided. One feature of the present invention shown in Figure 4 is the centralized error handling architecture of the cable modem networking manager. As set forth in the specification, the networking manager is a management task running on a cable modem. The networking manager is configured to establish and maintain Internet connectivity. The networking manager is designed as a state machine that includes a centralized error handling state to enable the networking manager to analyze all its information available on the operational state of the cable modem. The state machine further includes an operational state configured to monitor for error messages communicated from other states and to communicate the error messages to the centralized error handling state.

Each of the CMTRIS, OSSI, and DAVIC references cited by the Examiner fail to teach or suggest a cable modem networking manager having a centralized error handling state as disclosed in Figure 4 and as recited in claims 7 and 51. As the Examiner acknowledges, the CMTRIS and OSSI references, either alone or in combination, do not disclose an operational state configured to monitor for error messages from other states and to communicate the error messages to the centralized error handling state. (Office Action, pp. 4 and 8.) In addition,

although the DAVIC reference does disclose a MAC (“Media Access Control”) management protocol between a Network Interface Unit (“NIU”) of a cable modem and a *remote* Interactive Network Adapter (“INA”), the disclosed protocol does not teach or suggest utilizing a centralized error handling state and an operational state as recited by applicants’ claims.

Turning now to the claims, claim 7 is directed to a network station manager for a cable modem network station that includes a management task component configured to initialize the network station and to maintain connectivity of the network station with a cable network. More specifically, claim 7 recites, *inter alia*, “[an] operational state configured to monitor for error messages and other messages communicated from other states and to communicate the error messages to the centralized error handling state and to send request messages to an Operational Support System Interface (OSSI) management task.”

The Examiner argues that the DAVIC reference (citing pp. 71-71, 91, and 99-101) discloses a centralized error handling state as recited by claim 7. However, the cited passages, as well as the DAVIC reference generally, do not teach, suggest, or motivate the operational and error handling states as recited by claim 7. As an initial matter, the DAVIC reference describes operations performed by a networking component that is *remote* from the cable modem. Specifically, the DAVIC reference describes a communications protocol between a Network Interface Unit, which is a component of a cable modem, and an Interactive Network Adapter, which is a component that is *remote* from the cable modem and operated by a network service provider. (DAVIC, Figure 2, p. 12.) The DAVIC reference further describes a STATUS REQUEST message that is “sent by the INA to the NIU to retrieve information about the NIU’s health, connection information and error states.” (DAVIC, p. 99.) This passage makes clear that error handling and management functionality is performed by the Interactive Network Adapter, and not the cable modem. Accordingly, the DAVIC reference does not teach a *centralized error handling state of a cable modem*, as recited by claim 7.

Furthermore, there is no suggestion or motivation in any of the cited references to combine the references as suggested by the Examiner. It is respectfully suggested that the Examiner is engaging in impermissible hindsight reconstruction using the applicants’ claims and/or specification as a template. In particular, even in light of the recent Supreme Court

decision *KSR Int'l Co. v. Teleflex, Inc.*, the Examiner still has a burden to explicitly point to some reason for combining multiple references. U.S. Supreme Court Case No. 04-1350, Decided April 30, 2007; *see also*, USPTO Memorandum of May 3, 2007 regarding *KSR* (“it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed.”). However, the Examiner has not pointed to any such reason. An assertion such as “it would have been obvious to one skilled in the art at the time of invention to modify the combination of CMTRIS and OSS1 to utilize the central error handling state of the DAVIC Cable Modem specification” for the stated purpose is merely conclusory and insufficient by itself to establish a *prima facie* case for obviousness. (MPEP § 2142.01.IV; *See generally* MPEP §§ 2142-2143.03.) Accordingly, the Examiner has failed to provide a *prima facie* case for combining CMTRIS, OSS1, and DAVIC.

A person having ordinary skill in the art would *not* have been motivated to combine DAVIC with the teachings of CMTRIS and OSS1, as the Examiner suggests, for a number of reasons. First, the teachings are non-analogous. In particular, DAVIC describes a MAC management protocol, which focuses on the low-level, physical level of a cable modem network. In contrast, applicants’ claims focus on higher level networking protocols and services, such as TFTP, SNMP, and DHCP. (Claim 7 and applicants’ Specification, Figure 2.) Applicants specifically note that the details of the MAC layer are de-coupled from the operation of the station manager. (Applicants’ Specification, p. 5, lines 6-10.) Second, to combine such teachings would be to violate the layered approach of networking design. Network protocol stacks are designed in a layered manner in order to hide operational details of lower levels of the stack from higher levels of the stack. DAVIC even states: “The goal of the MAC protocol is to provide tools for higher layer protocols in order to transmit and receive data *transparently and independently* of the physical layer.” To apply the teachings of DAVIC to the higher-level functions recited by applicants’ claims would be to violate this basic principle of network stack design.

Claim 51 is directed to a method of administering a broadband cable modem network station for connectivity to a network. More specifically, claim 51 as amended recites, *inter alia*, “implementing an administration method internal to a cable modem, comprising: ...

entering an operational state upon successful initialization of the network station and connectivity with the network, and, while in the operational state, monitoring the tasks for messages, including error messages and task messages; receiving error messages and initiating error recovery in the centralized error handling state in response to the error messages.”

However, as discussed above with reference to claim 7, none of the cited references, alone or in any combination, teach or suggest the operation of, and interaction between, the operational state and centralized error handling state as recited by claim 51. In particular, DAVIC appears to disclose management functionality performed by an Interactive Network Adapter, which is a distinct entity from the cable modem and is remote from the cable modem, (DAVIC, Figure 2 and pp. 52, 99.) Claim 51, in contrast, clearly recites that the recited functions are *internal* to the cable modem. Accordingly, DAVIC does not teach or suggest the operational and error handling states as recited by claim 51. Furthermore, as also discussed with respect to claim 7, a person of ordinary skill in the art would not have been motivated to combine DAVIC with the teachings of CMTRIS and OSS1, because DAVIC is focused on a different, lower level of the network protocol stack and because such a combination would violate standard network stack design principles.

Official Notice

Finally, the Examiner has relied on numerous Official Notices in rejecting claims 8, 9, 54, and 57. Applicants respectfully traverse the Examiner’s taking of Official Notice. Applicants do not agree that the alleged facts were well known at the time of invention. For example, even if it is true that the use of software upgrade messages and reinitializing devices is *currently* well known in the art, it is not clear that such was the case at the time of invention by the applicants. For example, prior versions of Windows Update, referenced by the Examiner, did not perform their function automatically, and instead required users to initiate the process by visiting an appropriate Web site. If the Examiner maintains these rejections in the next Office Action, applicants request that the Examiner cite references in support of his position, pursuant to MPEP 2144.03.

Conclusion

In view of the foregoing, applicants respectfully submit that independent claims 7 and 51 are clearly allowable. Dependent claims 8-17 and 52-59, which depend from claims 7 and 51, respectively, are allowable for at least the reasons discussed above with respect to claims 7 and 51. In addition, the dependent claims are allowable due to the additional features recited therein, and applicants reserve the right to further traverse the rejections of the dependent claims if necessary.

In the event the Examiner finds minor informalities that can be resolved by telephone conference, the Examiner is urged to contact applicants' undersigned representative by telephone at (206) 622-4900 in order to expeditiously resolve prosecution of this application. Consequently, early and favorable action allowing these claims and passing this case to issuance is respectfully solicited.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,
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